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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,828	11/04/2003	Thomas W. Stone	10020907-1	6251

7590 09/09/2005  
AGILENT TECHNOLOGIES, INC.  
Legal Department, DL 429  
Intellectual Property Administration  
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Loveland, CO 80537-0599

EXAMINER

BELLO, AGUSTIN

ART UNIT PAPER NUMBER

2633

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/700,828	Applicant(s) STONE, THOMAS W.	
	Examiner Agustin Bello	Art Unit 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/4/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5, 7, 8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Doerr (U.S. Patent No. 6,754,410).

Regarding claims 1, 5, Doerr teaches separating input optical radiation into distinct input channels (reference numeral 501 in Figure 5); selecting desired distinct output channels (as seen at outputs 511-513 in Figure 5); propagating said distinct input channels through a selectable grating based switching/routing sub-system (reference numeral 502-508 in Figure 5) in order to direct said distinct input channels to desired distinct output channels; recombining said desired distinct output channels (as seen at outputs 511-513 in Figure 5).

Regarding claims 2, 7, Doerr teaches that the step of separating input optical radiation comprises the step of utilizing a separating sub-system comprising a pair of separating gratings (reference numeral 501, 502 in Figure 5); and, wherein the step of recombining said desired distinct output channels comprises the step of utilizing a recombining sub-system comprising a pair of recombining gratings (reference numeral 507 in Figure 5).

Regarding claims 3, 8, Doerr teaches that the step of separating input optical radiation comprises the step of utilizing a separating sub-system comprising at least one Array Waveguide

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Grating (AWG) (reference numeral 501 in Figure 5); and, wherein the step of recombining said desired distinct output channels comprises the step of utilizing a recombining sub-system comprising at least one Array Waveguide Grating (reference numeral 507-508 in Figure 5).

Regarding claim 10, Doerr teaches that said first separating diffraction grating is substantially (reference numeral 501 in Figure 5) parallel to said second separating diffraction grating (reference numeral 502 in Figure 5) , and, said first recombining diffraction grating (upper grating, reference numeral 507 in Figure 5) is substantially parallel to said second recombining diffraction grating (lower grating, reference numeral 507 in Figure 5).

3. Claims 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Stone (U.S. Patent No. 5,771,320).

Regarding claims 18-21, Stone, being the same inventor of the present instant application, discloses the optical switching/routing sub-system as claimed.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6, 9, 11-14, and 15-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Doerr in view of Stone (U.S. Patent No. 5,771,320).

Regarding claims 4, 6, 9, 11-14, Doerr differs from the claimed invention in that Doerr fails to specifically teach that the grating based switching/routing sub-system comprises a

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volume holographic grating based switching/routing sub-system or a pixilated switchable component. However, Stone teaches that a volume holographic grating based switching/routing sub-system and a pixilated switchable component is well known in the art. One skilled in the art would have been motivated to employ a volume holographic grating based switching/routing sub-system or a pixilated switchable component such as that taught by Stone in the device of Doerr due to its compactness, reduction of insertion losses, and crosstalk suppression (abstract Stone). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ the a volume holographic grating based switching/routing sub-system or a pixilated switchable component of Stone as the grating based switching/routing sub-system taught by Doerr.

Regarding claim 15, Doerr teaches that the step of separating input optical radiation comprises the step of utilizing a separating sub-system comprising at least one Array Waveguide Grating (AWG) (reference numeral 501 in Figure 5); and, wherein the step of recombining said desired distinct output channels comprises the step of utilizing a recombining sub-system comprising at least one Array Waveguide Grating (reference numeral 507-508 in Figure 5).

Regarding claim 16, Stone teaches the use of at least one microlens array (column 6 lines 40-45).

Regarding claim 17, the combination of references differs from the claimed invention in that it fails to specifically teach the use of anamorphic optics. However, anamorphic optics are well known in the art and Official Notice is given that they are well known in the art. One skilled in the art would have been motivated to employ anamorphic optics in the device of Doerr in order to magnify or demagnify the light of the system. Therefore, it would have been obvious

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to one skilled in the art at the time the invention was made to employ anamorphic optics in the device of the combination of references.

Regarding claim 18, the combination of references and Stone in particular teaches the limitations of this claim.

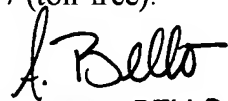
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AB

  
AGUSTIN BELLO  
PATENT EXAMINER